

Expanding Interprofessional Education:

Moving from Silos to Full Integration

Team Phoenix

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Abstract

Our team was tasked with answering the question ‘How can interprofessional learning be implemented at [UNC system colleges and] universities and what would be the benefits and costs?’ Through our research we discovered that interprofessional education (IPE) is already present in many UNC system schools to varying degrees. In this report we provide a brief overview of IPE programming in the UNC system of schools, with a primary focus on IPE activity at UNC Chapel Hill. Our research consisted of reviews of program and school websites, after which we conducted phone and in-person interviews with faculty, staff and students involved in IPE efforts across the UNC system. Integrating what we had learned, our team decided to update our challenge question to: “How can we help to make the IPE programs already in place more robust?” Through interviewing key stakeholders, we learned that the biggest barrier facing IPE programs at UNC-Chapel Hill, as well as system-wide, is lack of funding. We focused our efforts on solutions that could help raise funding to strengthen and support current IPE initiatives at Chapel Hill as well as helping grow new IPE initiatives. The recommendations on how to best utilize various IPE budget levels are sorted by level of funding available. Additionally, we developed a video to be distributed to development officers to use when working with prospective donors. The goal is to use this video as part of the Capital Campaign to receive funding from donors who come to understand the importance of IPE.

Interprofessional Education

Imagine this: a cancer patient goes in for a routine CT scan. There's just one problem - they've got the wrong patient. In the best case scenario, the patient undergoes an unneeded and expensive procedure that will add burden to the healthcare system. In a worst case scenario, because none of the staff know who this patient is they might miss the critical fact that he is allergic to the contrast dye used for the CT scan. He could go into anaphylactic shock, and the result could be fatal.

The cause of this problem was a simple communication error between the charge nurse, the transport crew, and the CT techs. Fortunately, something is being done in the education of health affairs students to help prevent and maybe even eliminate these types of communication errors, ultimately leading to better patient care.

Interprofessional education is a style of educating students from two or more professions together in order to increase their teamwork, communication, and effectiveness when working with patients. Put simply, it is students learning with, from, and about other professions. Communication and teamwork skills have been directly linked to better patient outcomes, and because of this IPE is being written into the standards of all major accrediting bodies for health affairs education.

Across Colleges and Universities of the UNC System

Study of schools in the UNC system revealed that creation and integration of interprofessional learning programs at Chapel Hill presents a special challenge due to the sheer number of health affairs schools and disciplines that are housed within the university. Many UNC-system schools have IPE initiatives that involve two or three departments, often housed within the same college or school. For example, at UNC-Wilmington, the College of Health and Human Services houses the School of Nursing, the School of Social Work and the School of Health and Applied Human Sciences. The three schools jointly offer IPE programming through their common college. We learned that this makes the

top-down support of their IPE program more easily coordinated and implemented. (A summary of IPE across the UNC-system can be found in Appendix A)

At UNC-Chapel Hill, IPE initiatives can easily involve over a dozen departments within six or more schools. Health affairs typically is comprised of the Schools of Dentistry, Medicine, Nursing, Pharmacy, and Public Health; the School of Social Work has also been integrated as a core member of most IPE initiatives. Due to the size and number of departments that can be involved in the administration of IPEs at UNC-Chapel Hill, we quickly discovered that much of this activity takes place in silos and that there are several barriers which impede communication and collaboration between departments. (A summary of IPE initiatives at Chapel Hill can be found in Appendix B) Chapel Hill is already working on breaking down these silos, and in March of 2016 the “IPE Steering Committee” was formed. This group has met biweekly since its inception, and the committee’s goals include developing a strategic plan for IPE implementation and matching IPE initiatives to professional competencies.

Challenges

As we surveyed faculty and staff from the health affairs schools and members of the IPE Steering Committee at Chapel Hill, several common themes emerged across programs with varying degrees of resources, participants, and backing. One critical barrier that comes up time and again is scheduling. It is extremely difficult to find a time that works for all participating students, faculty and staff. Not only finding a day of the week or time of day, but coordinating between students and faculty who are on entirely different semester schedules.

An additional barrier tied to scheduling is the size of the cohorts participating. For example, a cohort in the School of Medicine is about 180 students, whereas a cohort from a smaller department might only be 25 students. Within schools the programs can be accelerated, part time, or traditional. Lastly, the length of degree programs varies. For example, the School of Medicine typically offers four-year programs, but a Master of Social Work is earned in two years. In light of such scheduling differences, ensuring that all students have access to IPE programming is a significant challenge.

Another challenge of IPE is the structure of financial agreements and credits. Some students involved in IPE events earn academic credit for the experience, but many do not. If IPE is to be widespread and successful in health affairs units, there is a strong need to move toward a model of consistency. Likewise, there is currently no formalized structure or MOU in place regarding how faculty are compensated for organizing and leading IPE events. Designing for-credit courses between schools and departments is often stymied by lack of consistency or agreement regarding the distribution of instructional credit for the course and tuition fees garnered from enrollment.

Lack of common, designated space was also frequently identified as a barrier to IPE. Designation of a common and neutral space helps to ensure the success of IPE programming, as demonstrated by Winston-Salem State University's Virtual Hospital and Appalachian State University's Blue Cross & Blue Shield of NC Institute for Health and Human Services. The creation of shared space has also been credited for the success of IPE initiatives at UC-San Francisco, which is similar to Chapel Hill because it too houses several large health affairs schools. Shared space enables all participating schools to be on neutral ground and helps prevent one program, which may be larger in size or have more resources, from overshadowing the others.

Balancing stakeholder's interests and navigating the often political landscape of a university can also be difficult. Neutrality is an important factor in ensuring the success of IPE programming. Ownership can be a sticking point for many schools, and keeping IPE efforts within a flat, collaborative structure as opposed to a hierarchical one is paramount.

One of the most valuable resources consumed in IPE initiatives is time. Frequently, IPE activities at Chapel Hill have been initiated by faculty and staff for whom interprofessional education is a labor of love and who have been working with little to no compensation for their efforts. Having dedicated staff spearheading IPE efforts would make the biggest difference in the continued success of these initiatives.

To date, UNC-Chapel Hill has provided many beneficial interprofessional education opportunities to its students; often spearheaded by a combination of passionate faculty, staff and students, who are committed to interprofessional education and seek out like-minded individuals in other schools to coordinate and implement projects. While such organic programs can be robust and impactful, they run the risk of being fragile and easily broken should one of the stakeholders or primary proponents wind up leaving the university or is otherwise unable to carry on the work. As accreditation trends shift toward embedding IPE as a standard, the creation of robust and sustainable IPE programs will become a priority for the universities of the UNC system if students are to continue being awarded degrees and schools are to maintain their accreditation.

Tangible Solution to Address Funding Challenges

Many of the challenges we identified could be resolved at some level through the provision of sufficient and ongoing funding. Our full recommendation is to hire a program manager to serve as a neutral planner of IPE activities, to serve as a liaison between participating schools, and to handle the complex logistical challenges that face IPE programs. This person would promote and maintain a fully embedded IPE program at UNC-Chapel Hill.

To address the critical challenge of acquiring funding we decided to support the work of development offices by providing a deliverable that conveys the stories and experiences of students involved in IPE that could be shared with potential donors. This tested approach seemed the most promising way to secure the funding that is critically needed to support the growth of IPE programming.

Who the Project Serves

The Universities

Funding interprofessional education programs is key to UNC-system schools remaining competitive and retaining or gaining ranking. UNC-Chapel Hill currently ranks #2 nationally for its Primary Care program within the School of Medicine. The #1 program in the nation for Primary Care,

The University of Washington, has made a significant investment in IPE as can be determined by examination of their available web resources (cf., <http://depts.washington.edu/uwhsa/initiatives/interprofessional-education/ipe-homepage/>). Because of the relevance of IPE study to primary care work, we believe that a key to UNC-Chapel Hill remaining competitive on this measure is to develop a more mature IPE program. A fully mature IPE program could possibly help UNC-Chapel Hill to overtake the #1 position.

The Faculty

Funding these programs helps to recruit and retain the highest level of faculty to the colleges and universities of the UNC System. Having a designated IPE program manager would also lighten the load on faculty who are currently donating their time to these efforts.

The Students

Funding robust and sustainable interprofessional education programs provides a better experiential education experience for students, particularly those in health affairs. IPE coordination would enable more students to participate in IPE activities. Provision of sustainable interprofessional education programming will also be more of a requirement in the future, as many health affairs accrediting bodies (e.g. Dentistry) have begun to embed IPE as a standard part of the student experience that is required for graduation.

Future Patients

Funding IPE programs invests future health care workers with the best, empirically measured, treatments and care possible, maximizing benefit to patients and increasing likelihood of positive patient outcomes.

University Development Offices

Our deliverable will help development officers to better connect with potential donors with interests in quality health care service.

How it works

Videos are Created to Tell Student IPE Stories

The idea is a simple one. Create a video that captures the stories of students who have participated in IPE, and then share that video with potential donors through development offices. Development officers take ownership of those videos and use them when working with potential donors.

Video Creation

The initial challenge is locating an appropriate pool of students. Our process for this is discussed later in the section “Required Resources for Project Deliverable”. With students identified we conducted an initial round of phone interviews to introduce what we were doing and to ask the student some questions about their IPE experience. If there was evidence that the student had a particularly compelling story to tell about IPE, then we finished the phone conversation with asking whether they would consent to be interviewed on video, and set up a time to do that work.

For the video interviews we brought students to the CHIP Collaboratory in the Health Sciences Library, and then recorded them as we went through most of the same questions that were asked during the phone interview. Additional questions were asked based on responses, or to further tease out interesting threads.

The completed video was transferred to a computer and then edited in Camtasia Studio. The final video was produced in an MP4 format to make it easily viewable across a range of devices. Our compression rate rendered the videos at a size of about 200MB per 5 minutes of video. At this size we were able to easily store and share the video online, although additional compression would be recommended for live-streaming.

The Capital Campaign

The capital campaign is a fundraising initiative put forth by UNC-Chapel Hill. Currently, the projected goal of the campaign is currently between 5 and 7 billion dollars. Sources for that money will include gifts and bequests from donors outside of the university. Typically, development officers are responsible for identifying, communicating with, and securing gifts from these potential donors.

Our plan is to entrust these videos of student IPE stories to development officers so that they can use them in their interactions with potential donors. These videos might be shared online, or shown at luncheon or dinner events that are common options for bringing a lot of these donors together at once.

Future Recommendations

Because of time constraints our group was only able to interview students and alumni from the Master of Social Work program. It is our recommendation that future efforts here should incorporate a diverse cast of students from multiple health affairs programs.

Who needs to be involved to make it work.

In order to successfully solicit and obtain funds to support current and future interprofessional education initiatives, a variety of stakeholders must be involved. The vision and ultimate goal for the solicitations must be crafted by leadership and the development offices. The IPE Steering Committee might best be tasked to lead this effort, as the committee is tasked with developing a strategic plan for the implementation of IPE at UNC-Chapel Hill and also connecting IPE efforts within and between internal schools. Production of video testimonies and IPE success stories would naturally involve IPE students, staff, and faculty who are willing to be interviewed and have compelling stories to share. Creation of effective media and marketing tools would also require involvement from appropriate technical and media specialists; these consultants might be comprised of members of departmental or school communications offices.

Development officers must be involved in this initiative and can provide vital data regarding the identification of potential donors who would be interested and likely to fund interprofessional education

initiatives. Potential donors and their networks are also vital to the success of this proposed solicitation strategy. Surveying existing donors who make regular contributions could produce helpful feedback regarding which stories are most compelling and impactful, with the purpose of designing future marketing campaigns that are maximally effective in reaching an audience interested in supporting interprofessional education.

Responsibility for Implementation

The primary responsibility for implementation of this project would likely rest with the IPE Steering Committee and would be facilitated by unanimous support from the senior administrators from all of the health affairs units. Once fully sanctioned, development officers would also play a vital role in contributing to the production of the testimonial videos as well as designing a strategy of deployment, once the videos are crafted.

Timelines to plan and implement the project

This is a project for which the deliverable has low overhead cost, ramps up quickly, and can be executed quickly (within 1-2 weeks). Our execution of this project required two weeks of time. That time was spent as follows: 2 hours making initial email contact with students; 6 hours conducting initial interviews; 4 hours recording video; 3 hours watching the video and making notes; 4 hours excerpting video segments; and 12 hours assembling and producing the first video draft. An additional hour was used to finalize the video after recommendations for edits were made.

Our recommendation is that additional time be spent on future iterations of this video. To increase the efficacy of future videos, additional interviews should be conducted with students, faculty, and other personnel involved in IPE programs, which would increase the amount of time required for each component of the process.

Possible time savings could be realized through additional familiarity with the process and more skillful work. Additionally, once video segments are excerpted they might be reused in future videos, thus saving additional time.

The capital campaign begins in earnest next year. One unknown variable that will impact the timeline is the length of time it might take for a development office to identify a potential donor for whom this video may be appropriate.

Required Resources for Project Deliverable

Necessary technical resources for this project include: recording space; recording hardware; lighting; video editing software; locations to store and showcase the resulting video(s). Another necessary resource is the time of those involved. Staff are needed to connect with IPE students, perform interviews, and to assemble and edit the raw footage into a professional video. IPE students are also needed, and can be contacted through enrollment in IPE programs and through faculty involved with IPE programming.

Estimated Costs for Fully Embedded IPE Program

Our research revealed that a fully embedded interprofessional education program would cost approximately \$125,000 annually. Ideally a donation of \$625,000 would be requested so that the IPE program could be implemented for 5 years. This would allow time for pre-IPE and post-IPE implementation data to be collected, through surveys and other methods, and analyzed to determine the effectiveness of IPE and the success of the program. Program cost breakdown is as follows:

Program administrative support

Funding for salary and benefits of a Program Manager to oversee administrative operations for IPE planning is . Our conservative projection for a full-time, permanent staff member to fill this role totals \$90,300 (\$70,000 base salary + 29% fringe benefits). This Program Manager position is essential in order to maintain operational work by handling many of the logistical responsibilities of IPE planning. One of the challenges with IPE is the resource of time. Faculty, staff, and administrators may see the value of IPE but struggle with how to incorporate the responsibilities onto already-full plates. Potential job responsibilities to be taken on by the Program Manager could include: budget

management, scheduling and calendaring of courses and/or events, marketing and communications, supervision of student apprentices, liaison between participating departments, and policy compliance.

Faculty instructional release/course buyout

In order for faculty to devote more time to design and implementation of interprofessional education programs, some degree of instructional release may be necessary. Course buyouts are releases from instruction granted to individual faculty members by the administration, in exchange for funding (provided by the faculty member being released), used to pay for a substitute teacher and to cover administrative costs. We estimate that a pool of \$28,000 would be necessary to support faculty course buyouts. This budgeted amount is merely an estimate and will vary depending on the level of faculty (Assistant, Associate, Full Professor) and the extent of the buyouts required to achieve sufficient faculty participation in IPE design and implementation.

Office supplies

Our budget estimate includes a line item for office supplies in the amount of \$1,500, and would encompass everyday use supplies as well as marketing and communication needs. The purchase and maintenance of IT technologies is also included in this estimate.

Special events

The projected expenditure for special events is \$3,000. This would include orientation and graduate programs, as well as special, ad hoc IPE events throughout the year. This cost would cover the food, beverages, cost of materials, space rentals, and honorariums to speakers for scheduled special activities and events.

Special equipment or technology

Depending on the type of IPE activity, special equipment may need to be purchased that is specific to certain professions in order to host realistic simulations or training events; we estimate that \$2,000 would be needed toward this line item. This budget item could alternatively be used for the development of an app to chronicle or push IPE activities on campus to the large demographic of health

affairs students. These funds could also be designated to fund advertisement of IPE activities via social media platforms, with the aim of reaching students and creating a broader audience for interprofessional education activities.

Professional development

Our budget also includes a designation of \$200 toward professional development activities. These funds could be used for professional development activities or training for the Program Manager and/or the purchase of subscriptions to academic journals.

How Project Success is Measured and Evaluated

The efficacy of the project proposal can be measured by the amount of gifts and funding that this approach helps to secure. Our group will know that it has been successful if the recommendations we proposed are successfully funded - or to what degree they are funded - after the first year of the capital campaign. We will check back with the IPE Steering Committee in a year to inquire about successes and failures.

APPENDIX A**Summary of Interprofessional Education Efforts in UNC-System Schools****Appalachian State University**

Appalachian State University is home to the Blue Cross & Blue Shield of NC Institute for Health and Human Services, which was formed in 2005 and is housed within the Beaver College of Health Sciences, the mission of the IHHS is to provide public health related multidisciplinary research opportunities, clinical services as well as community outreach efforts.

The facility serves to bring together faculty, students and professionals, from an array of health and human services, to promote training and service collaboration and also to increase the campus' access to internship opportunities that are interprofessional in nature.

Winston-Salem State University

The Virtual Hospital is a four thousand square foot simulation laboratory that serves as a hub for interprofessional education opportunities at Winston-Salem State University. This cutting edge educational facility contains multiple high fidelity simulators and provides valuable opportunities for students to hone clinical skills. The Virtual Hospital is utilized by both undergraduate and graduate students in WSSU's School of Health Sciences. Since 2007, the Physical Therapy Department at WSSU has secured grant funding to assist with the construction of the Virtual Hospital; the ribbon cutting center for the facility took place on September 30, 2011.

There are two distinct Virtual Hospital locations; the first was established on the campus of and in partnership with the Wake Forest University Baptist Medical Center, while the second, Enterprise Center location, being distinct to WSSU.

The RAMS Know H.O.W. (Hands on Wellness) Mobile Unit is a community outreach program provided by Winston-Salem State University School of Health Sciences. Health Affairs faculty and staff

work with student volunteers to offer free preventive health services to the residents of East Winston, conveniently within their community. This team conducts the preventive health screenings and wellness services to local providers, as needed.

North Carolina Agricultural & Technical University

IPE has been present in the Strategic Plan at North Carolina Agricultural and Technical State University, since 2011, referred to as interdisciplinary learning. Interprofessional education is heavily embedded in the curriculum of A&T's School of Nursing program, including a course titled Collaborative Interprofessional Practice, aimed at highlighting the value, roles and expectations of health practitioners who are engaged in collaborative interprofessional practice. No fewer than six of the courses within the NC A&T School of Nursing program require students to work in "interprofessional teams" to "employ evidence-based practice, technology and informatics" with the aim of providing "quality patient-centered care."

Fayetteville State University

Fayetteville State University opened the Collaborative Institute for Interprofessional Education and Practice in 2013 with funds from a HRSA grant. In this clinic, supervised Nursing, Psychology and Social Work students provide integrated services for military personnel, their families, and veterans. The grant came to an end last summer and the program was forced to scale back services. It also went from free to fee-for-service on a sliding scale. The program still benefits not only students and faculty, but the community at large.

UNC-Greensboro

Creating and offering interprofessional learning opportunities is a key part of the strategic plan of the School of Health & Human Sciences at UNC-G. Endorsed by the faculty in 2012, the first objective of the plan is to increase interdisciplinary courses and programs for graduate and undergraduate students.

In 2014, academic leaders from UNC-Greensboro, High Point University and NC A&T University collaborated to form a working group dedicated to creating a quality interprofessional education program to serve their health affairs student populations. Despite the challenges of creating an IPE program to address the needs of students at different institutions, the group conducted a small pilot this past academic year, consisting of workshops held in September and October 2015 and one session in April of this year.

UNC-Charlotte

One of the stated Student Learning Objectives of the Bachelor of Science in Respiratory Therapy at UNC Charlotte states that “Students will demonstrate the ability to solve complex clinical situations while serving as a member of an inter-professional team taking into consideration the viewpoints of all members of the team with the focus on patient-centered care.”

UNC-Wilmington

The state of the art Simulation Learning Center in UNC-Wilmington’s School of Nursing now hosts IPE simulations involving students from Nursing, Social Work, Recreational Therapy and Gerontology. These integrated teams of students treat patients played by actors in real-time simulation scenarios. The program has grown to include students from Exercise Science, Sports Medicine, UNC Medical students from New Hanover Regional Medical Center, as well as local community paramedics. These events are growing to include students from Exercise Science and Sports Medicine.

East Carolina University

In spring 2013 East Carolina University’s Vice Chancellor appointed a working group to grow IPE at ECU. That fall the first IPE course was offered and included students from Medicine and Nursing. Not long after ECU added an ARHQ initiative called TeamSTEPPS, an interprofessional intervention training program aimed at communication and teamwork skills, which in turn reduces medical errors. Spearheading their efforts is the newly appointed Assistant Vice Chancellor for Interprofessional Collaboration. Her focus is to imbed IPE into the curriculum, specifically into

simulations. ECU's goal is to host 4 IPE activities per semester; they are currently hosting 1-2 per semester. IPE facilitators are also making efforts to include students from Dental Medicine and Nutrition. A new course, Community Health, will be implemented in a virtual clinic and include students from Nursing and Dental Medicine. One of the reasons IPE is so successful at ECU is that efforts have been both top-down and bottom-up. That being said, there is still no direct administrative support assigned to IPE initiatives.

UNC-Pembroke:

The IPE activities at UNC-P also extend beyond the classroom and outside of the traditional reach of the university. On April 8, 2016, students from Campbell University's School of Osteopathic Medicine teamed up with UNCP nursing students to participate in a day of learning.

APPENDIX B

Summary of Interprofessional Education Efforts at UNC-Chapel Hill

Classes

There are several for-credit IPE courses offered. Many courses, such as “Older Adult Theory” and “Death and Dying” are housed in a single school but include students from many schools. Other courses, such as “Population Health” are co-taught, in this case by professors in the Schools of Nursing and Public Health. Population Health was the result of a Macy Foundation won by faculty dedicated to IPE at UNC-Chapel Hill. The course began in Fall 2015 and includes students from Nursing, Medicine, Social Work, Pharmacy, Public Health.

Oral Wellness and Nutrition (OWN)

The Oral Wellness and Nutrition program began as a collaboration between the School of Dentistry and the Nutrition department, with a goal of providing nutrition counseling services to diabetic patients in the UNC Dental Clinic. During the pilot year, approximately 30 dental students participated in the program, along with a handful of faculty and students from the Nutrition department. In 2015, Pharmacy students joined the program to add prescription medications counseling for the diabetic patients of the clinic. The program concluded in the spring of 2016 and will move forward as a collaboration between the School of Dentistry and the School of Pharmacy.

School of Medicine

The School of Medicine offers the elective course Interprofessional Training and Communication to second year medicine and nursing students each year; between five to twelve medicine students participate in the course each year. Another IPE activity presented to all students in each School of Medicine cohort is the assignment to a member of the Interpreter Services group, a

pairing which allows the students to gain insight into social work services and the provision quality patient care.

School of Pharmacy/School of Dentistry Shared Faculty Position

Funds garnered from an AHEC Innovations grant, awarded in the spring of 2016 has allowed for the creation of a faculty position that is shared between the School of Dentistry and the School of Pharmacy, which was filled in August of this year.

Geriatric IPE Event

One of the longest running IPE events at UNC-Chapel Hill is called the “Interprofessional Education Collaborative in Geriatrics” and is held every spring. It began around 2000 with Physical Therapy, Occupational Therapy, Nutrition, and Pharmacy and has been adding schools and departments almost yearly. This past Spring, 166 students from 9 disciplines come together and consult on geriatric case studies in interprofessional teams.

PrimeCare Grant

Social Work was awarded the “PrimeCare” grant (2014-2017) through which 28 students receive funding to promote integrative outpatient healthcare. Students are required to engage in IPE as part of this grant, which most of them do through their internship placement.

SHAC

The Student Health Action Coalition operates a Medical clinic in Carrboro and a Dental Clinic in Chapel Hill which offer free care to our community. Their stated mission is to “Create an interdisciplinary service learning environment for students in the health science programs at UNC.” Though they say interdisciplinary, the work they are doing surely qualifies as interprofessional.

IPE Steering Committee

In 2011 the Health Affairs Collaborative convened to discuss common issues, including IPE. Early this year, this group of Associate Deans agreed to each fund a 10% faculty position in their school, who would be focused on building and organizing more robust IPE programming. Those designated

faculty formed the “IPE Steering Committee” which convened for the first time this past April and have been acting quickly to connect the silos across campus. The committee aims to:

- Examine accreditation standards and strategize ways to introduce IPE to meet competencies for each school, providing a unified approach
- Develop a strategic plan for IPE implementation
- Serve as a liaison to the schools to connect faculty for IPE activities
- Articulate a clear outcome vision for students exposed to IPE
- Ensures that IPE content matches appropriate learning need for students
- Prioritize IPE initiatives and match them to competencies for learning need